

Product: AMAZE[®] GRANULES
EPA Reg. No.: 62719-261-869
Effective Date: 07/31/1996

MATERIAL SAFETY DATA SHEET

Emergency Phone 800/535-5053

Size	Product Number	UPC Code
4 lb.	40504	0 49424 40504 6
4 lb.	40507	0 49424 40504 6
8 lb.	40508	0 49424 40508 4

Note: Be sure to compare the EPA registration number as given on the MSDS with the EPA registration number as given on the label as some products have had the active ingredients changed without a corresponding change in the UPC number or in the item description.

1. INGREDIENTS:

N-Butyl-N-ethyl-alpha, alpha, alpha-trifluoro-2,6-dinitro-p-toluidine (Benefin) CAS No. 001861-40-1
3,5-dinitro-N4, N4-dipropylsulfanilamide (oryzalin) CAS No. 019044-88-3
Other ingredients 98%

2. PHYSICAL DATA:

BOILING POINT:	N/A
VAPOR PRESSURE:	N/A
VAPOR DENSITY:	N/A
SOL. IN WATER:	Not soluble in water
SPECIFIC GRAVITY:	N/A
APPEARANCE:	Light yellow-orange free flowing granule
ODOR:	Slight aromatic odor
pH(aqueous 50/50):	7.5 to 8.5

3. FIRE AND EXPLOSION HAZARD DATA:

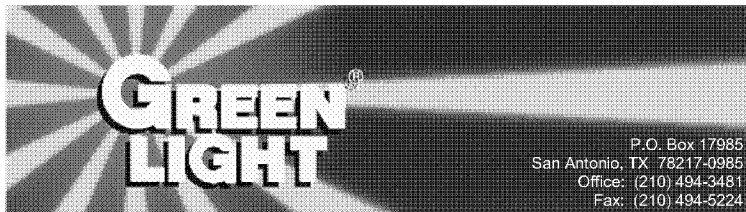
FLASH POINT:	N/A
METHOD USED:	N/A
FLAMMABLE LIMITS:	LFL: N/A UFL: NA
AUTO-IGNITION TEMPERATURE:	N/A
EXTINGUISHING MEDIA:	Use water, CO ₂ or dry chemicals.
FIRE AND EXPLOSION HAZARDS:	Product will emit toxic fumes as it burns.
FIRE-FIGHTING EQUIPMENT:	Wear full protective clothing and use self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY (Conditions to avoid):	None known
INCOMPATIBILITY (Specific materials to avoid):	None known
HAZARDOUS DECOMPOSITION PRODUCTS:	Will emit toxic vapors as it burns.
HAZARDOUS POLYMERIZATION:	Does not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ENVIRONMENTAL DATA:	Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment washwaters.
ACTION TO TAKE FOR SPILLS:	Contain and sweep up material of small spills and dispose as waste. Large spills report to Infotrac at 800/535-5053 and DowElanco for assistance. Prevent runoff.
DISPOSAL METHOD:	Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility in accordance with applicable regulations.



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6. HEALTH HAZARD DATA:

ACUTE EXPOSURE (XL 2G):

EYES:

Rabbit, irritant

SKIN:

Rabbit, 2,000 mg/kg, no deaths or toxicity, slight irritant.

INHALATION:

This formulation is not considered to be an inhalation hazard due to coarse granular nature and low potential for aerosolization.

INGESTION:

Rat, 3,750 mg/kg, no deaths, leg weakness.

SENSITIZATION:

Guinea pig, not a contact sensitizer.

The following effects were reported in chronic, teratogenic, and reproductive toxicity studies in laboratory animals where experimental dosage levels and durations of exposure were far in excess of those likely to occur in humans.

CHRONIC EXPOSURE

(Benefin Technical):

CHRONIC TOXICITY:

Repeated large oral doses of benefin produced liver effects that included increased weight, and enzyme activity and enlargement of liver cells. Additional effects included reduced growth and survival, decreased hemoglobin and red blood cell counts, and increased weights of thyroids, uterus, ovaries, and testes.

TERATOLOGY & REPRODUCTION:

Not teratogenic. No impairment of reproductive capacity.

MUTAGENICITY:

Not mutagenic in either bacterial or mammalian cells.

CARCINOGENICITY:

Not listed as a carcinogen or potential carcinogen by ACGIH, NCI/NTP, IARC, or OSHA. Not considered to be carcinogenic in lifetime feeding studies.

CHRONIC EXPOSURE

(Oryzalin Technical):

CHRONIC TOXICITY:

Growth retardation; decreased survival; decreased blood sugar levels; decreased red blood cell counts; decreased hemoglobin; increased cholesterol, blood urea nitrogen, bilirubin, and alkaline phosphatase; increased liver, kidney, spleen, and testes weights; increased thyroid tumors probably secondary to the antithyroid activity of oryzalin; increased incidence of benign skin and mammary gland tumors.

TERATOLOGY & REPRODUCTION:

Not teratogenic. No impairment of reproductive capacity.

MUTAGENICITY:

Not mutagenic in bacterial cells; in significant potential for mutagenicity in mammalian cells.

CARCINOGENICITY:

Not listed as a carcinogen or potential carcinogen by IARC, NCI/NTP, OSHA, or ACGIH. Not considered to be carcinogenic in lifetime feed studies. EPA - Class C - possible human carcinogen (limited evidence from animal studies).

SIGNS & SYMPTOMS OF EXPOSURE:

Benefin

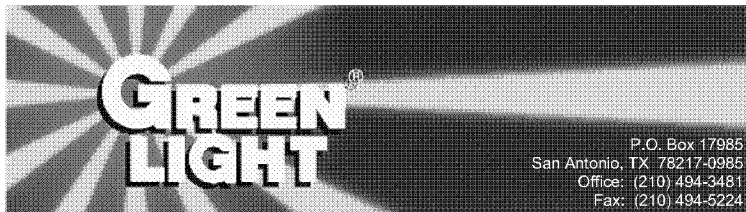
From field experience with finished products containing benefin, some of which contain organic solvents, there have been reports of nausea, headache, rash, eye irritation, and dyspnea. Rare or singular events also reported: fever, paresthesia, drowsiness, aplastic anemia, chills, anaphylactoid reaction, syncope, abdominal cramping, coughing, liver pain, loss of memory, diaphoresis, mouth burning, hand burning, face edema, loss of taste, muscle spasm, and dizziness.

Oryzalin

The most commonly reported effect of exposure is contact dermatitis or rash. Some cases have occurred during manufacture and may be related to an intermediate chemical, but other reports have involved finished products of oryzalin. Eye irritation may also occur. One instance of ingestion was uneventful.

PRIMARY ROUTES OF ENTRY:

Skin and inhalation.



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- 7. FIRST AID:**
- EYES:** Immediately flush eyes with plenty of water and call a physician if irritation develops.
- SKIN:** Wash all exposed areas with plenty of soap and water. Wash all contaminated clothing before reuse. Call a physician if irritation develops.
- INGESTION:** Do not induce vomiting. Call physician or Poison Control Center. If available, administer activated charcoal (6 - 8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.
- INHALATION:** Coarse granular particles make inadvertent inhalation unlikely. If discomfort occurs, move individual to fresh air. If breathing difficulty occurs, provide cardiopulmonary resuscitation assistance and get medical attention.
- MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** No corroborative information is available that would establish the aggravation of a medical condition by exposure to Amaze. Animal studies indicate that benfenin may be a potential contact sensitizer, but this has not been shown to occur under normal conditions of use. Highly allergic individuals should take special precautions to avoid skin contact with Amaze or breathing of dust.
- 8. HANDLING PRECAUTIONS:**
- EXPOSURE GUIDELINE(S):** Benfenin, PEL and TLV not established; Oryzalin, PEL and TLV not established.
- VENTILATION:** Good general ventilation should be sufficient for most conditions.
- RESPIRATORY PROTECTION:** In enclosed spaces, use NIOSH approved dust respirator.
- SKIN PROTECTION:** Wear protective clothing such as coveralls, a long sleeved shirt, and impermeable gloves when handling this product.
- EYE PROTECTION:** Use safety glasses.
- 9. ADDITIONAL INFORMATION:**
- SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Causes eye irritation. Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing dust and contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 704):** Health: 2 Flammability: 1 Reactivity: 0
- SHIPPING REQUIREMENTS:** DOT Hazard Class: Not regulated
- REGULATORY INFORMATION:** (Not meant to be an all-inclusive-selected regulations represented.)

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